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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SOHN, SEUNG C

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,094

Applicant(s)

LAUTENSCHLAGER ET AL.

Examiner

Seung C. Sohn

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-23 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-23 and 25-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 24, 2003 (Paper No. 10) has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. ***Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Walter (Patent No. US 4,568,827).***

Referring to claim 30, Walter shows in Figs. 1-3 optical proximity switch (light barrier apparatus) with a housing (11 and 12), wherein an optics module (13, i.e., lens and 17, i.e., light emitting diode in the second housing part 12) and a separate electronics module (i.e. electronic circuit in the first housing part 11) are located in the housing (Col. 1, lines 54-66); wherein the optics module is pivotally mounted in the

housing for rotation around a longitudinal axis thereof (by universal coupling 15) and wherein the electronics module is fixed in the housing (Col. 3, lines 54-61). Also, it is inherent that the electronic module of Walter has all electronic components necessary for operating the optical proximity switch since the device of Walter performs as light barrier apparatus, a kind of optical proximity switches.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. ***Claims 21-23, 25-29 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walter (Patent No. US 4,568,827) in view of Lederer (Patent No. US 4,173,717).***

Referring to claim 21, Walter shows in Figs. 1-3 optical proximity switch (light barrier apparatus) with a housing (11 and 12), wherein an optics module (12, i.e., second housing part, 15, i.e., universal coupling and 35, i.e., clamping ring) and a separate electronics module (i.e. electronic circuit in the first housing part 11) are located in the housing (Col. 1, lines 54-66); wherein the housing contains a receiving means (35, i.e., clamping ring) and wherein the optics module comprises an engagement device (15, i.e. universal coupling) by which the optics module is attached in the housing by engagement of the engagement device in the receiving means, and

wherein the engagement device of the optics module is adapted to enable the optics module to be installed in the housing in at least two different orientations which correspond to an alignment of the optics module relative to the light passage opening (Col. 1, lines 36-53). Also, it is inherent that the electronic module of Walter has all electronic components necessary for operating the optical proximity switch since the device of Walter performs as light barrier apparatus, a kind of optical proximity switches.

Walter discloses as above, but does not disclose that the housing has two side walls at an angle to one another and a light passage opening in one of the side walls. Lederer shows in Fig. 1 a housing (17, i.e., U-shaped cover plate) having two side walls at an angle to one another and a light passage opening (18, i.e., optical window) in one of the side walls (Col. 2, lines 28-47). It would have been obvious to one of ordinary skill in the art to provide a cover plate of Lederer to the device of Walter for the purpose of protecting the light barrier apparatus.

Referring to claim 22, Walter shows in Fig. 3 a transmitter (17, i.e., light emitting diode), wherein the transmitter is located in a receptacle device (46, i.e., chamber) which is provided in the optics module (12) (Col. 4, lines 19-26).

Referring to claim 23, Walter shows in Fig. 3 a receiver (18, i.e. photo electric converter), wherein the receiver is a component of the electronics module (Col. 2, lines 3-5).

Referring to claim 25, Walter discloses as above, but does not disclose that the electronics module comprises a flexible, foldable conductor film. It would have been

obvious to one of ordinary skill in the art to provide a flexible, foldable conductor film in the device of Walter for the purpose of decreasing the size of the device.

Referring to claim 26, Walter shows in Fig. 1 that the receiving means (35) and the engagement device (15) comprise holes and pins (50, i.e., clamping screw and 52, i.e., nut) (Col. 4, lines 54-60).

Referring to claim 27, Walter shows in Fig. 1 that the engagement device (15) is engaged in the receiving means (35).

Referring to claim 28, Lederer discloses that the transmitter (34) is a laser diode (Col. 2, line 53).

Referring to claim 29, Lederer discloses that the receiver (34) is a large-area photodiode (Col. 2, line 53).

Referring to claim 31, Lederer shows in Fig. 1 that the housing has two side walls (17, i.e., U-shaped cover plate) which are at an angle to one another; wherein a light passage opening (18, i.e., optical window or filter) is provided in each of the side walls and the optics module (30) is pivotally mounted in the housing enabling the optics module to be selectively aligned with either one of the two light passage openings (Col. 2, lines 36-41).

Referring to claim 32, Lederer shows as above, but is silent that two side walls are connected to one another by a cylindrical sector-shaped wall section having a continuous light passage opening. It would have been obvious to one of ordinary skill in the art to provide cylindrical sector-shaped wall section in the device of Lederer instead

of right-angle U-shaped wall for the purpose of maximizing the sensitivity of photoelectric emitter/detector.

Referring to claim 33, it is inherent that the electronics module is configurable to adapt to each of the different orientations of the optics module since the device of Walter should work whatever the orientation of optics module is.

Conclusion


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung C. Sohn whose telephone number is (703) 308-4093. The examiner can normally be reached on Monday through Friday from 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SCS

SCS
September 27, 2003


KEVIN PYO
PRIMARY EXAMINER